## REMARKS

In the Office Action of September 27, 2004, the Examiner rejected claims 1, 2, and 4 to 7 as being anticipated by newly discovered Sugimura. Claim 3 was rejected as being obvious over Sugimura in view of Lee. (Claims 8 to 14 were withdrawn from consideration).

In setting forth the present rejections, the Examiner states that Figs. 5 and 6 of Sugimura show that the distance suction tube 12 moves depends upon the relative thickness of components A1 and A2.

### The Presently Claimed Invention

Claim 1 was previously amended to explicitly set forth that **the distance that the vacuum tube (26) retracts into the tool head (25) depends upon the thickness of the component (20)**.

For example, a seen in Applicant's Fig. 5A, when tool head (25) is lowered such that its vacuum tube (26) contacts a component (20A or 20B), the vacuum tube (26) is partially retracted into tool head (25). As can be seen, when the component is thicker (20B), the vacuum tube (26) retracts further into tool head (25) than when the component is thinner (20A). This feature can be used to position components of different thicknesses such that the bottoms of these components are mounted at the exact vertical height of a printed circuit board.

### The Sugimura System:

Sugimura teaches a component suction head capable of holding components having either small or large surface areas, as follows.

To hold components with a small surface area, Sugimura uses a single small suction tube 12. (This is seen in Fig. 6 where suction tube 12 is used to pick up component A2.)

To hold components with a larger surface area, Sugimura uses two suction tubes 11 and 12 together. (This is seen in Fig. 5 where suction tube 11 is lowered around suction tube 12 so that suction tubes 11 and 12 together pick up component A1.)

As can be seen, suction tube 12 remains at a fixed location with respect to arm 19 at all times. In contrast, suction tube 11 is either moved to an "up" position (as seen in Fig. 6)

or to a "down" position such that its distal end is parallel to the distal end of tube 12 (as seen in Fig. 5).

**The Present Invention Distinguished**

As stated above, the presently claimed invention sets forth a system wherein **the distance that vacuum tube (26) retracts into tool head (25) depends upon the thickness of the component (20)**.

Sugimura does not operate in this manner, for the following reasons.

First, suction tube 12 does not move at all with respect to arm 19. Rather, tube 11 moves up and down with respect to fixed tube 12.

Secondly, the distance of movement of tube 11 does not depend upon the thickness of component A1 or A2. This is because tube 11 is either moved up to an "up" position such that its distal end is raised above the distal end of tube 12 (as seen in Fig. 6); or tube 11 is moved to a "down" position such that its distal end is aligned with the distal end of tube 12 (as seen in Fig. 5).

As a result, neither tube 11 nor 12 moves by a distance that depends upon the thickness of the component A1 or A2, as presently claimed.

In view of these important differences between the presently claimed invention and the Sugimura system, the Applicants respectfully request the withdrawal of the present rejections in view Sugimura. The allowance of claims 1 to 7 is respectfully requested.

Should the Examiner feel that a telephone conference would advance prosecution of the present application, he is invited to call the undersigned attorney at the number listed below.

Respectfully submitted,
BURNS, DOANE, SWECKER & MATHIS, L.L.P.

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By: _____
David R. Heckadon
Registration No. 50,184

P.O. Box 1404
Alexandria, Virginia 22313-1404
(650) 622-2300

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